

Date: Thursday, 05/02/2009 3:45:59 PM
 User: Julie Dawson

Process Sheet

Customer : CC-DAR01 Dart Aerospace Ltd.	Drawing Name : COBRA SKIDTUBE ASS'Y
Job Number : 45552	
Estimate Number : 13182	
P.O. Number :	Part Number : D209669013
This Issue : 05/02/2009 S.O. No. :	Drawing Number : D209-669-013
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : SKIDTUBES	Drawing Revision : B
Previous Run : 43593	Material :
Written By :	Due Date : 03/03/2009 Qty: 1 Um: Each
Checked & Approved By : <u>JUD 09.02.06</u>	
Comment : New est. 08.02.13 LL, verified by:DD Est Rev:B 08-05-20 chg QTY of D2570 DD verified by:	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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C209104114

**Comment:** DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP d209-669-011 CHG002 003 S 09/04/14

2.0	PACKAGING 1	PACKAGING RESOURCE #1
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**Comment:** PACKAGING RESOURCE #1

Pick: Packing Kit

3.0	45552A	COBRA SKIDTUBE ASS'Y
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**Comment:** Sub-Component COBRA SKIDTUBE ASS'Y1 x D209-669-043 Batch 45552A

4.0	D2570	Bushing
-----	-------	---------

**Comment:** Qty.: 24.0000 Each(s)/Unit Total : 24.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
24	D2570	Bushing	<u>B357805</u> <u>B341636</u>

5.0	D27361	Lug Assembly, 205 GHW
-----	--------	-----------------------

**Comment:** Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D2736-1	Bracket	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 05/02/2009 3:45:59 PM
User: Julie Dawson

Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: COBRA SKIDTUBE ASS'Y

Job Number: 45552

Part Number: D209669013

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

D27363

Lug Assembly, 205 GHW



D3405-043

B 46312



8/3/18

Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2736-3 Bracket

per DSI 9450

7.0

D29171

Saddle LH



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Saddle LH

batch B43135

SL

8.0

D29181

Saddle LH



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Saddle LH

batch B43137

B43755

SL

9.0

D2929

Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Spacer

batch 43374

SL

10.0

D2930

Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Spacer

batch B21296

B43378

SL

11.0

D2068041

Tow Ring



D3407-041

B 44402

8/3/18

per DSI 9450



10

Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Tow Ring

batch

9/2/23

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 05/02/2009 3:45:59 PM
User: Julie Dawson

Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: COBRA SKIDTUBE ASS'Y

Job Number: 45552

Part Number: D209669013

Job Number:



Seq. #:	Machine Or Operation:	Description :
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12.0	AN47A	Bolt
------	-------	------



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)

Bolt

batch

M108071

30

13.0	AN446A	Bolt
------	--------	------



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part Number Description Batch

4 AN4-46A Bolt

M108246

50

14.0	AN451A	Bolt
------	--------	------



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Bolt

batch

M108376

50

15.0	AN536A	Bolt
------	--------	------



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

batch

M110467

50

16.0	AN960JD416	Washer
------	------------	--------



Comment: Qty.: 32.0000 Each(s)/Unit Total : 32.0000 Each(s)

Washer

batch

M110523

50

17.0	AN960JD516	Washer
------	------------	--------



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Washer

batch

M110363

9/2/23

50

13 a
13 b
13 c

5 x MS21043-4
1 x D3456-1
2 x D34175

B M11125
B 43002
B 43270

per DSI 9450

4/3/18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 05/02/2009 3:45:59 PM
User: Julie Dawson

Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: COBRA SKIDTUBE ASS'Y

Job Number: 45552

Part Number: D209669013

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

AN9704

Washer



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)
Washer
batch M110704

SP

19.0

MS21042L4

Nut



Comment: Qty.: 29.0000 Each(s)/Unit Total: 29.0000 Each(s)
Nut
batch M1109282

SP

20.0

MS21042L5

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
Nut
batch M110382

01/2/23

SP

21.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

5 09/04/14

22.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Identify and pack for shipping as per PPP D209-669-013
Location: Rev B

12/9/14

23.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/04/14

Job Completion



u 01.04.14

DART		TEL: 1-613-632-3336	
TRANSPORT CANADA APPROVAL # 09-89		FAX: 1-613-632-4443	
P N	D209-669-013	CHG	CHG002
DESC	Skidtube LH	STC	
LOT	B45552	STC	
MODEL	BeLLAH-1P/E/S	STC	
US PATENT # 5735484		MADE IN CANADA	
CANADA FOREIGN PATENTS PENDING			

5552A

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D209-669 REV. B

RECEIVED 09.02.24

INSTRUCTIONS:

1) FOR D209-669-011/-012/-013/-014 SKID TUBES @ CHANGE 003 AND SUBSEQUENT MODIFY THE FOLLOWING:

- a) REPLACE THE D2968-041 TOW RING WITH THE D3407-041 TOW RING ASSEMBLY.
- b) REPLACE THE D2736-1 AND D2736-3 GHW LUGS WITH THE D3405-041 AND D3405-043 LUG ASSEMBLIES.
- c) AMEND THE PARTS LIST IN SECTION 5.0 OF INSTALLATION INSTRUCTIONS IIN-D209-669 REV. B AS FOLLOWS:

NOTE: ALL INSTALLATION FASTENERS FOR THE ABOVE CHANGES HAVE BEEN UPDATED SEE THE AMENDED PARTS LIST FOR DETAILS.

45552

A	NEW ISSUE	AJS	09.02.24
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9450	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SKIDTUBE INSTALLATIONS	NTS
DATE	09.02.24	COPYRIGHT © 2009 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

5.0 PARTS LIST

ITEM	QTY -011	QTY -012	QTY -013	QTY -014	QTY -041	QTY -043	PART NUMBER	DESCRIPTION
	X						D209-669-011	SKIDTUBE INSTALLATION, LH (AH-1W/J)
		X					D209-669-012	SKIDTUBE INSTALLATION, RH (AH-1W/J)
			X				D209-669-013	SKIDTUBE INSTALLATION, LH (AH-1P/F/S)
				X			D209-669-014	SKIDTUBE INSTALLATION, RH (AH-1P/F/S)
	1	1			X		D209-669-041	REPLACEMENT SKIDTUBE (AH-1W/J)
			1	1		X	D209-669-043	REPLACEMENT SKIDTUBE (AH-1P/F/S)

IS:

50	4	4	1	1			D3405-043	LUG ASSEMBLY
51	8	8	4	4			AN4C47A	BOLT
52	16	16	8	8			D2570	BUSHING
53	8	8	4	4			MS21043-4	NUT
54			1	1			D3405-041	LUG ASSEMBLY
60	1	1	1	1			D3407-041	TOW RING ASSEMBLY
61	1	1	1	1			D3456-1	WASHER
62	1	1	1	1			MS21043-4	NUT
63	2	2	2	2			D3417-5	WASHER

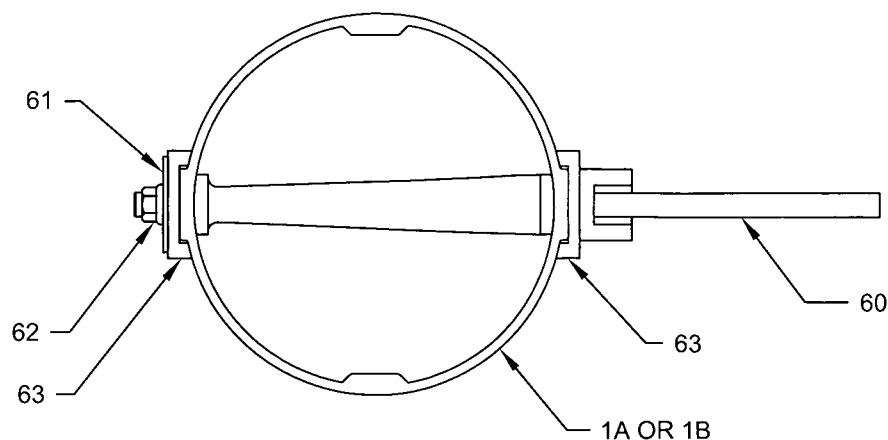
WAS:

50	4	4	1	1			D2736-3	GHW LUG
51	8	8	4	4			AN4-46A	BOLT
52	16	16	8	8			D2570	BUSHING
53	8	8	4	4			MS21042L4	NUT (OR MS21042-4)
54			1	1			D2736-1	GHW LUG
60	1	1	1	1			D2968-041	TOW RING
61	1	1	1	1			AN970-4	WASHER
62	1	1	1	1			MS21042L4	NUT (OR MS21042-4)

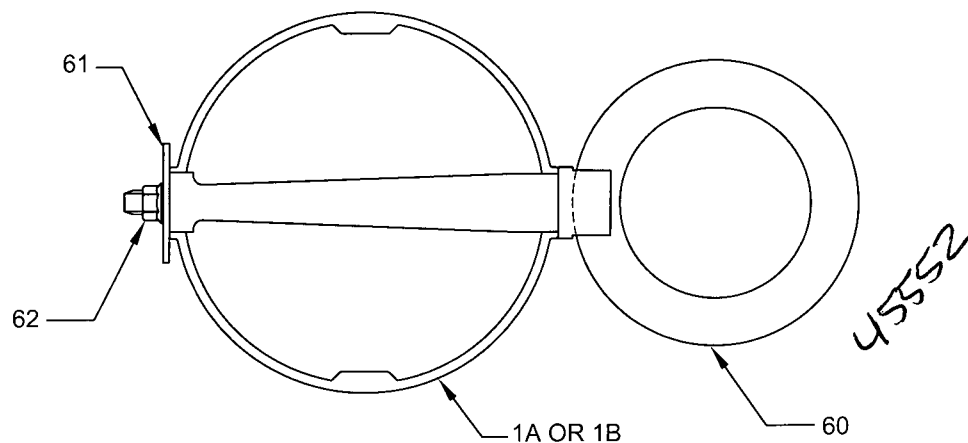
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN	AJS	
CHECKED		DRAWING NO. REV. A
MFG. APPR.	N/A	DSI 9450 SHEET 2 OF 3
APPROVED		TITLE SCALE
DE APPR.		SKIDTUBE INSTALLATIONS NTS
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INSTALL TOW RING ASSEMBLY AS SHOWN BELOW (REFER TO FIGURE 3, SECTION F-F OF IIN-D209-669 REV. B.

IS:



WAS:



NO PICTORIAL CHANGE REQUIRED FOR GROUND HANDLING WHEEL LUG CHANGES.

DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9450	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SKIDTUBE INSTALLATIONS	NTS
DATE	09.02.24	COPYRIGHT © 2009 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

Item Status

18/02/2009 1:03:29PM Page 125 of 544

		Available	On Hand	On SO	Location	Lot #	Change #	Qty
D2071	Cable Assembly	5	5	0	MAIN	39559		5
								5
								5
D2072	Aspirator Manifold	7	7	0	MAIN	3089		7
								7
								7
D2084	Manifold	6	6	0	MAIN	1469		6
								6
								6
D2090	Aspirator 90 degrees	21	21	0	MAIN	1681		21
								21
								21
D2091	Aspirator	3	3	0	MAIN	30137		3
								3
								3
D2094	Aspirator	35	35	0	MAIN	28133		15
					MAIN	43741		20
								35
								35
D2095	Aspirator	32	32	0	MAIN	15535		1
					MAIN	30154		31
								32
								32
D209-669-011	Skidtube LH	0	0	0	MAIN	23780		0
								0
								0
D209-669-014	Skidtube RH	1	1	0	MAIN	39209 CHG002		1
								1
								1

246070

L Lacelle

From: Alan Stocker [astocker@dartaero.com]
Sent: February 24, 2009 9:50 AM
To: 'L Lacelle'; 'Mike Petsche'
Subject: RE: tow rings....again

I talked to Peter it should not be a problem to do up a kit and red tag it. The kit should look like DSI9417 Rev B. The DSI for the Cobra will be DSI 9450.

Alan

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: February 24, 2009 9:28 AM
To: 'Alan Stocker'; 'Mike Petsche'
Subject: RE: tow rings....again

Cool, thx
Think I can package it anyway and put a red tag on it to add the DSI paperwork?

LL

From: Alan Stocker [mailto:astocker@dartaero.com]
Sent: February 24, 2009 9:23 AM
To: 'L Lacelle'; 'Mike Petsche'
Subject: RE: tow rings....again

Good Morning,

Sorry but the cobra got shoved to the back of the pile I did not think it was a priority. I will do the DSI this morning but nothing will get signed until David is available.

Again sorry for the delay.

Alan

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: February 24, 2009 8:16 AM
To: 'Mike Petsche'
Cc: 'Alan Stocker'
Subject: RE: tow rings....again

Still waiting to package....???

From: Mike Petsche [mailto:mpetsche@dartaero.com]
Sent: December 23, 2008 11:50 AM
To: 'L Lacelle'
Subject: RE: tow rings....again

Yup. It will have to be done too. Alan will deal with it, not peter.

24/02/2009

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: December 23, 2008 11:29 AM
To: 'Peter Hum'
Cc: 'Mike Petsche'
Subject: RE: tow rings....again

So??

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: December 17, 2008 2:15 PM
To: 'Peter Hum'
Cc: 'Mike Petsche'
Subject: tow rings....again

The cobra skids are still pulling up the D2968 tow rings, are these to be changed to D3407's also??

Thank You,
Linda Lacelle
Production Manager
Dart Aerospace Ltd

No virus found in this outgoing message.
Checked by AVG.
Version: 7.5.552 / Virus Database: 270.10.0/1861 - Release Date: 22/12/2008 11:23 AM

No virus found in this outgoing message.
Checked by AVG.
Version: 7.5.552 / Virus Database: 270.10.0/1861 - Release Date: 22/12/2008 11:23 AM

L Lacelle

From: Alan Stocker [astocker@dartaero.com]
Sent: February 25, 2009 10:55 AM
To: 'L Lacelle'
Subject: RE: ground handling lugs

No problem, when we start using the new ones D209-669-011/-012/-013/-014 will go from Change 2 change 3.

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: February 25, 2009 10:48 AM
To: 'Alan Stocker'
Cc: bbeckett@dartaero.com; 'Mike Petsche'
Subject: RE: ground handling lugs

Phewwwwwwwwww...thx

From: Alan Stocker [mailto:astocker@dartaero.com]
Sent: February 25, 2009 10:43 AM
To: 'L Lacelle'
Cc: bbeckett@dartaero.com; 'Mike Petsche'
Subject: RE: ground handling lugs

No I said you can deplete stock same as all of the other skidtubes just make sure the carbon steel and the stainless are not mixed.

Sorry if I was not clear.

Alan

From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: February 25, 2009 10:40 AM
To: 'Alan Stocker'
Cc: bbeckett@dartaero.com; 'Mike Petsche'
Subject: ground handling lugs

Hi,
We discussed yesterday the change out of the grd handling lugs in the cobras and other skids, then ou mentioned that the existing stock of D3405-041, D3405-043 were no good, right? Are you absolutely sure these cannot be used somewhere? There would be a total of \$4114.88 of parts to scrap!! ??

Thank You,
Linda Lacelle
Production Manager
Dart Aerospace Ltd

25/02/2009

Date: Wednesday, 25/02/2009 7:36:48 AM
 User: Linda Lacelle

'Where Used' Report

Item Number: D3246041		In	Estimate
Quote	Customer	Part Number	Sequence No.
Item: D3246041			
12033	CU-DAR001 Dart Helicopters Services	DSI9279011	3
Total Records Retrieved :		1	

D3405-041
 D3405-1 + 7
 D3405-3 + 6
 + 26
 + 24
 1800
 1800
 66.89
 87.52
 12600
 10800
 1695.36
 2275.52
 3880.88